

CLAIMES

1. A method of manufacturing a shaped light metal article, comprising the steps of:

5 forming a plastic worked article by plastic working an article for plastic working made of light metal material; and
subjecting the plastic worked article to a post-plastic working heat treatment at a temperature in a range of 250 to 400°C for between 20 minutes and 10 hours.

10 2. The method of manufacturing a shaped light metal article according to claim 1,

wherein the light metal is a magnesium alloy.

15 3. The method of manufacturing a shaped light metal article according to claim 1,

wherein the post-plastic working heat treatment is a heat treatment that makes the plastic worked article highly ductile.

20

4. The method of manufacturing a shaped light metal article according to claim 1,

wherein the light metal material composing the article for plastic working is formed of light metal alloy,

25

the method further comprising the step of subjecting the article for plastic working to a pre-plastic working heat treatment at a temperature that is lower than a temperature

at which eutectic of the light metal alloy starts to be fused.

5. The method of manufacturing a shaped light metal article according to claim 4,

5 wherein the pre-plastic working heat treatment is performed for at least one hour.

6. The method of manufacturing a shaped light metal article according to claim 5,

10 wherein the pre-plastic working heat treatment is performed at a temperature in a range of 350 to 450°C for between 10 and 20 hours.

15 7. The method of manufacturing a shaped light metal article according to claim 4,

10-221-084001
1000450-120401
10-221-084001
 wherein the pre-plastic working heat treatment is performed so as to produce blisters in a surface of the article for plastic working due to expansion of gas included in the article for plastic working.

20 8. The method of manufacturing a shaped light metal article according to claim 1,

 wherein internal defects included in the article for plastic working take up no more than 10% of a volume of the
25 article for plastic working.

9. The method of manufacturing a shaped light metal article

according to claim 1,

wherein the article for plastic working is formed by solidifying semimolten light metal.

- 5 10. The method of manufacturing a shaped light metal article according to claim 1,

wherein the article for plastic working is formed by injection molding molten light metal.

- 10 11. The method of manufacturing a shaped light metal article according to claim 10,

wherein the molten light metal is in a semimolten state below a melting point of the light metal.

10000480 120401